

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listing of claims in the application.

1. (Currently Amended) A method of operating on a virtual content repository (VCR) that represents a plurality of content repositories having different types of content, the method comprising:  
creating a hierarchy of hierarchy nodes in the VCR comprising the substeps of: [[.]]  
indicating a location of each hierarchy node in the hierarchy by an identifier,  
wherein the node has an identifier that indicates a location of the node in said VCR  
relating each hierarchy node to a type of content; and  
associating each hierarchy node with a first schema;  
creating a content node for each of the plurality of content repositories;  
associating [[the]] each hierarchy node with at least one content node;  
associating each content node with a second schema; of: 1) a property; and 2) a schema;  
storing the hierarchy and content nodes in [[said]] the VCR; and  
wherein storing the hierarchy and content nodes in [[said]] the VCR will result in the at least one  
property and/or results in storing each schema [[being stored]] in one of [[said]] the plurality of content  
repositories.
2. (Currently Amended) The method of claim 1 wherein:  
the first and second schemas comprise one or more properties, wherein each [[the]] property is an  
association between a name and at least one value.
3. (Original) The method of claim 2 wherein:  
the at least one value can be a text string, a number, an image, an audio/visual presentation, or  
binary data.
4. (Currently Amended) The method of claim 1 [[wherein]] further comprising:  
integrating each one of the plurality of content repositories into the VCR by use of one or more of  
a VCR browser, a content node editor, a schema editor and a property editor; exposes a first set of services  
to enable its integration into the VCR.
5. (Currently Amended) The method of claim [[1]] 2 wherein:  
[[the schema includes]] each property comprises at least one property definition.

6. (Currently Amended) The method of claim 5 wherein:

[[a]] the at least one property definition can specify at least one of [[the following for a property]]:

- property choices;
- a reference;
- a data type;
- whether [[the]] each property is mandatory;
- whether [[the]] each property is multi-valued;
- whether [[the]] each property is primary;
- whether [[the]] each property is read-only; and
- whether [[the]] each property is restricted.

7-8. (Canceled).

9. (Currently amended) A method of operating on a virtual content repository (VCR) that represents a plurality of content repositories having different types of content, the method comprising:

creating [[obtaining]] a hierarchy of hierarchy nodes in [[from said]] the VCR comprising the substeps of: [[,]]

indicating a location of each hierarchy node in the hierarchy by an identifier;

~~wherein the node has an identifier that indicates a location of the node in said VCR~~

relating each hierarchy node to a type of content; and

associating each hierarchy node with a first schema;

creating a content node for each of the plurality of content repositories;

associating each hierarchy node with at least one content node;

associating each content node with a second schema ~~wherein the node is associated with information that includes at least one of: 1) a property; and 2) a schema;~~

storing each schema ~~wherein the node information is stored in [[at least]] one of [[said]] the plurality of content repositories; and~~

integrating [[wherein]] each one of the plurality of content repositories into the VCR by use of one or more of a VCR browser, a content node editor, a schema editor and a property editor ~~exposes a first set of services to enable its integration into the VCR.~~

10. (Currently amended) The method of claim 9 wherein:  
the first and second schemas comprise one or more properties, wherein each [[a]] property is an association between a name and at least one value.
11. (Original) The method of claim 10 wherein:  
the at least one value can be a text string, a number, an image, an audio/visual presentation, or binary data.
12. (Original) The method of claim 9 wherein:  
the identifier is a path.
13. (Currently amended) The method of claim ~~[[9]]~~ 10 wherein:  
~~[[a schema includes]]~~ each property comprises at least one property definition.
14. (Currently amended) The method of claim 13 wherein:  
[[a]] the at least one property definition can specify at least one of [[the following for a property]]:  
property choices;  
a reference;  
a data type;  
whether ~~[[the]]~~ each property is mandatory;  
whether ~~[[the]]~~ each property is multi-valued;  
whether ~~[[the]]~~ each property is primary;  
whether ~~[[the]]~~ each property is read-only; and  
whether ~~[[the]]~~ each property is restricted.
- 15-16. (Canceled).
17. (Currently amended) A method of operating on a virtual content repository (VCR) that represents a plurality of content repositories having different types of content wherein the VCR has a node and wherein said node is associated with information, [[said]] the method comprising:  
selecting a node from a hierarchy of both hierarchy nodes and content nodes in the VCR, wherein a location of the node in the hierarchy of nodes is indicated by an identifier, each node is associated with a schema and each content node is associated with one of the plurality of content repositories; and

~~obtaining said node, wherein said node has an identifier that indicates a unique location in said VCR;~~

performing an operation on ~~[[said]]~~ the node, wherein the operation is one of: ~~[[1]]~~ deleting ~~[[said]]~~ the node; ~~[[2]]~~ changing the location of ~~[[said]]~~ the node in the VCR; ~~[[3]]~~ reading ~~[[said]]~~ the schema associated with the node ~~[[information]]~~; and ~~[[4]]~~ updating ~~[[said]]~~ the schema associated with the node ~~[[information]]~~;

~~wherein the VCR represents a plurality of content repositories; and~~

~~wherein the information includes at least one of ~~[[1]]~~ a property~~[[1]]~~ and ~~[[2]]~~ a schema.~~

18. (Currently amended) The method of claim 17 wherein:

the schema comprises one or more properties, wherein each ~~[[a]]~~ property is an association between a name and at least one value.

19. (Original) The method of claim 18 wherein:

the at least one value can be a text string, a number, an image, an audio/visual presentation, or binary data.

20. (Currently amended) The method of claim 17 ~~[[wherein]]~~ further comprising:

integrating each one of the plurality of content repositories into the VCR by use of one or more of a VCR browser, a content node editor, a schema editor and a property editor~~exposes a first set of services to enable its integration into the VCR.~~

21. (Currently amended) The method of claim ~~[[17]]~~ 18 wherein:

~~[[a schema includes]]~~ each property comprises at least one property definition.

22. (Currently amended) The method of claim 21 wherein:

~~[[a]]~~ the at least one property definition can specify at least one of ~~[[the following for a property]]~~:

property choices;

a reference;

a data type;

whether ~~[[the]]~~ each property is mandatory;

whether ~~[[the]]~~ each property is multi-valued;

whether ~~[[the]]~~ each property is primary;

whether [[the]] each property is read-only; and  
whether [[the]] each property is restricted.

23-32. (Canceled).

33. (Currently amended) A system for a virtual content repository (VCR) that represents a plurality of content repositories having different types of content, the system comprising:

means for [[obtaining a node]] selecting a node from a hierarchy of both hierarchy nodes and content nodes in the VCR, wherein a location of the node in the hierarchy of nodes is indicated by an identifier, the node is associated with a schema and each content node is associated with one of the plurality of content repositories; and[[,]] wherein the node has an identifier that indicates a unique location in a virtual content repository (VCR), and wherein the node is associated with information;

means for performing an operation on the node, wherein the operation is one of [[: 1]] deleting the node; [[2]] changing the location of the node in the VCR; [[3]] reading the schema associated with the node[[information]]; and [[4]] updating the schema associated with the node[[information]];

~~wherein the VCR represents a plurality of content repositories; and~~

~~wherein the information includes at least one of [[: 1]] a property; and[[ 2]] a schema.~~

34. (Currently Amended) The system of claim 33 wherein:

a schema comprises one or more properties, wherein each [[the]] property is an association between a name and at least one value.

35. (Original) The system of claim 34 wherein:

the at least one value can be a text string, a number, an image, an audio/visual presentation, or binary data.

36. (Currently Amended) The system of claim 33 wherein:

each one of the plurality of content repositories is integrated into the VCR by use of one or more of a VCR browser, a content node editor, a schema editor and a property editor~~exposes a first set of services to enable its integration into the VCR.~~

37. (Currently amended) The system of claim [[33]] 34 wherein:

[[a schema includes]] each property comprises at least one property definition.



38. (Currently amended) The system of claim 37 wherein:

[[a]] the at least one property definition can specify at least one of [[the following for a property]]:

- property choices;
- a reference;
- a data type;
- whether [[the]] each property is mandatory;
- whether [[the]] each property is multi-valued;
- whether [[the]] each property is primary;
- whether [[the]] each property is read-only; and
- whether [[the]] each property is restricted.

39-40. (Canceled).

41. (Currently Amended) A [machine] computer readable medium having instructions stored thereon that when executed by [a processor] one or more processors on the computer cause [a system] the computer to:

[[obtain]] select a node from a hierarchy of both hierarchy nodes and content nodes in the VCR, wherein a location of the node in the hierarchy of nodes is indicated by an identifier, the node is associated with a schema and each content node is associated with one of the plurality of content repositories; and a node, wherein the node has an identifier that indicates a unique location in a virtual content repository (VCR), and wherein the node is associated with information;

perform an operation on the node, wherein the operation is one of [[: 1]] deleting the node; [[2]] changing the location of the node in the VCR; [[3]] reading the schema associated with the node[[information]]; and [[4]] updating the schema associated with the node [[information]];

~~wherein the VCR includes a plurality of content repositories; and~~

~~wherein the information includes at least one of: [[1]] a property; and [[2]] a schema.~~

42. (Currently Amended) The [machine] computer readable medium of claim 41 wherein:

the schema comprises one or more properties, wherein each [[the]] property is an association between a name and at least one value.

43. (Currently Amended) The [machine] computer readable medium of claim 42 wherein:  
the at least one value can be a text string, a number, an image, an audio/visual presentation, or binary data.
44. (Currently Amended) The [machine] computer readable medium of claim 41 wherein:  
each one of the plurality of content repositories is integrated into the VCR by use of one or more of a VCR browser, a content node editor, a schema editor and a property editor~~exposes a first set of services to enable its integration into the VCR.~~
45. (Currently Amended) The [machine] computer readable medium of claim ~~[[41]]~~ 42 wherein:  
~~[[the schema includes]]~~ each property comprises at least one property definition.
46. (Currently Amended) The [machine] computer readable medium of claim 45 wherein:  
[[a]] the at least one property definition can specify at least one of [[the following for a property]]:  
property choices;  
a reference;  
a data type;  
whether [[the]] each property is mandatory;  
whether [[the]] each property is multi-valued;  
whether [[the]] each property is primary;  
whether [[the]] each property is read-only; and  
whether [[the]] each property is restricted.
- 47-48. (Canceled).
49. (New) The method of claim 1 wherein:  
the identifier is a path.
50. (New) The method of claim 17 wherein:  
the identifier is a path.
51. (New) The system of claim 33 wherein:  
the identifier is a path.

52. (New) The computer readable medium of claim 41 wherein:  
the identifier is a path.
53. (New) A method of operating on a virtual content repository (VCR) that represents a plurality of content repositories having different types of content, the method comprising:  
creating a hierarchy of hierarchy nodes in the VCR comprising the substeps of:  
indicating a location of each hierarchy node in the hierarchy by an identifier; and  
relating each hierarchy node to a type of content;  
creating content nodes for each of the plurality of content repositories;  
associating each hierarchy node with at least one content node; and  
storing the hierarchy and content nodes in the VCR.
54. (New) The method of claim 53 further comprising:  
associating each hierarchy node with a first schema.
55. (New) The method of claim 53 further comprising:  
associating each content node with a second schema.
56. (New) The method of claim 55 wherein:  
the second schema comprises one or more properties, wherein each property is an association between a name and at least one value.
57. (New) The method of claim 56 wherein:  
the at least one value can be a text string, a number, an image, an audio/visual presentation, or binary data.
58. (New) The method of claim 53 further comprising:  
integrating each one of the plurality of content repositories into the VCR by use of one or more of a VCR browser, a content node editor, a schema editor and a property editor.
59. (New) The method of claim 56 wherein:  
each property comprises at least one property definition.



60. (New) The method of claim 59 wherein:  
a the at least one property definition can specify at least one of:  
property choices;  
a reference;  
a data type;  
whether each property is mandatory;  
whether each property is multi-valued;  
whether each property is primary;  
whether each property is read-only; and  
whether each property is restricted.
61. (New) The method of claim 53 wherein:  
the identifier is a path.
62. (New) A method of operating on a virtual content repository (VCR) that represents a plurality of content repositories having different types of content, the method comprising:  
selecting a node from a hierarchy of both hierarchy nodes and content nodes in the VCR, wherein a location of the node in the hierarchy of nodes is indicated by an identifier and each content node is associated with one of the plurality of content repositories; and  
performing an operation on the node, wherein the operation is one of: deleting the node; changing the location of the node in the VCR; reading the node; and updating the node.
63. (New) The method of claim 62 wherein:  
the node is associated with a schema comprising one or more properties, wherein each property is an association between a name and at least one value.
64. (New) The method of claim 63 wherein:  
the at least one value can be a text string, a number, an image, an audio/visual presentation, or binary data.
65. (New) The method of claim 62 further comprising:  
integrating each one of the plurality of content repositories into the VCR by use of one or more of a VCR browser, a content node editor, a schema editor and a property editor.

66. (New) The method of claim 63 wherein:

each property comprises at least one property definition specifying at least one of:

property choices;

a reference;

a data type;

whether each property is mandatory;

whether each property is multi-valued;

whether each property is primary;

whether each property is read-only; and

whether each property is restricted.

**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

**BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

☐ **BLACK BORDERS**

☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**

☐ **FADED TEXT OR DRAWING**

☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**

☐ **SKEWED/SLANTED IMAGES**

☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**

☐ **GRAY SCALE DOCUMENTS**

☒ **LINE(S) OR MARK(S) ON ORIGINAL DOCUMENT**

☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**

☐ **OTHER:** \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.**